NEW ENVIRONMENTAL GOVERNANCE WORKSHOP
Cape Town
28th July 2011

The Centre of Criminology at the University of Cape Town, in collaboration with the Regulatory Institutions Network (RegNet) at the Australian National University, hosted a one-day workshop to explore the emerging 'New Environmental Governance (NEG)' framework.

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(Transcript from the talk Environment Law, Regulation Governance: Shifting Architectures)

"Thanks very much. It's really nice to be here, thank you very much for inviting me and in particular thanks to all the people who've been wonderfully friendly and helpful while we've been here and spent a lot of their time with us and been enormously generous. Anyway, so what I want to do in this session is to provide a context. I want to talk about architectures of law, regulation and governance; because I think it will be more helpful to understand the things that Cameron and Clifford are going to talk about in more detail later, then with the new environmental governance or collaborative environmental governance, if we understand more about the journey that led to that particular rise. Now I'm conscious that my background is in Anglo-Saxon countries, in the developed world and really most of my examples are all in the US, Canada, Australia, New Zealand, etcetera. But I think as we move towards collaborative governance you will see that towards the end of the journey there's a strong resonance with this type of things that are important for South Africa, but I'm also conscious that some of what I say is about particular countries and can't be generalised from.

So I want to talk about a journey and it's really a journey from law to regulation to governance. So law in the narrow sense of the statutes that are enacted by parliament and then enforced by state regulators – and that was really where the focus of now how do we protect the environment? When the first legislation was passed in say the United States in 1970 that was very much the focus – we'll pass the statute, we'll pass laws. It's a very narrow conception of how we're going to change how we're going to protect the environment. Gradually we shifted towards regulation – regulation being a broader term, it certainly includes state legislation but it can include self-regulation, current regulation, voluntary initiatives with some government underpinning – some of us might call it information-based regulation where you simply give the public information and that empowers them to put pressure on industry. It can include, if you like, surrogate regulators – sometimes it isn't the state, it isn't government that enforces the law but non-governmental organisations or supply-chain pressure. So regulation is broader than law, but it still has the state at the centre of it, it is still the state that pulling a log of the levers – not the state alone but the state is still orchestrating much of what goes on.

If you move further along the continuum from law to regulation to governance – governance is of course simply social steering, and that social steering may involve government as one particular node, but government need not necessarily be at the centre of it and you have a multiplicity of different perks or nodes which actually is how a particular policy area is steered. So that's crudely the sort of journey I want to depict. So I'm interested in how has the architecture of that law, regulation, and governance, changed over a 40-year period? Why are those changes taking place? What are their consequences? Have we actually moved from law, from a very state oriented focus to one that's governance where the state is just one player amongst many, is that really where we've got to in the end? And if we have, is that a desirable position? And of course I'm going to talk about lots of different types of architectures, which ones work and in which particular context – and one of the lessons is there are no magic bullets; there is no single answer to our problems, it very much depends on the context and what lessons can we learn about what types of architectures work in particular types of contexts – and to say something also about that theory.

So with that as a background, as a structure I thought I'd talk firstly about the various roles of the state, of government; then talk about how business actually is a player in regulation, often quite a proactive player; how civil society and non-governmental organisations in particular are also important in that whole game. But really although it's helpful for heuristic purposes to talk about the state, business, NGO separately – of course they're all interacting and so I really want to capture that interaction by talking an integrated approach a little later on.

So let me start with history and a history which began in countries like the US and the United Kingdom, Australia, but has to some extent rippled out. So in the late 1960s there's been a number of environmental disasters, perhaps modest ones compared to what we're going to face in the future with climate change but nevertheless they had a big impact on public consciousness. There are a number of very influential books warning for example of the dangers of pesticides and of the environmental problems that we're going to face. It was a relatively idealist generation. There was a lot of pressure for legislation and in 1970 the first legislation was enacted in the United States, also in parts of Australia. That sort of legislation was quite distinctive in its approach; it was distinctive in that it focused very much on what the economists like to call command-and-control regulation.

Command-and-control is a somewhat majorative term and I think that's unfair but it stuck so I'll it. So the focus was on pollution, it wasn't on biodiversity, it certainly wasn't on climate change – the focus was on pollution, the focus was on the big end of town, if you like, the big factories that were pumping out a lot of junk, not the small guys. The focus was on end of pipe; you don't have to transform society, we simply put something on the end of the pipes to catch the pollution and shove it somewhere else. And command-and-control really simply meant the command was: flush out, not pollute and the control was: if you do pollute we'll hit you over the head with a very large stick, or if you're in Australia then a rather small twig – so it varied from culture to culture but the concept was nevertheless the same. But the tools that were used were usually either technology-based standards – if you have a pulp and paper mill you

must put in place the following pollution control technology, and every pulp and paper mill must have exactly the same technology to clean up its act.

Or they were what we call sometimes specification standards – very prescriptive tight regulations saying exactly what you had to do in particular circumstances, often through the environmental licence. So even up until very recently in Australia we still carry on with this stuff. So you're hooked at an environmental licence or a pollution licence of an Australian industrial facility that would say: the 20 cm pipe at the eastern perimeter must be no more than eight parts per million of lead, two parts per million of this aluminium or whatever it was, over a time or a day, so and every pipe was regulated as to the discharge limits, which is a very micro way of trying to manage. Anyway, that was the approach and it was actually common to a number of countries in North America and Western Europe certainly. It's important to know because we still have quite a lot of residue of that system now, at least in many countries.

Did it work? Actually it did – I mean, despite that a later generation of economists came along and denigrated it, but actually to a substantial extent it did work with the problems of the time. A study that I did with my Berkeley colleagues on the pulp and paper industry – we measured pollution, we had good records going back for those 40 years. Every time there was a major statute ratcheting up the standards, there was a drop – a little lack period, then a real sharp drop in the levels of pollution. Then it would plateau again, then 10 years later there will be another statute ratcheting up the standards again and you'd find another sharp drop. So you can show statistically it actually did work commonly in cleaning up the air and the water, and 10 years later or 15 years the air and water, which were the main focus, were much cleaner than they would have been otherwise. So it was by and large quite effective in delivering environmental outcomes.

But it has to be said that sometimes it didn't deliver those outcomes at least cost, that is to say it wasn't in economist terms necessarily efficient, it didn't allow business flexibility to devise the least cost way of solving particular problems, and so it was subject to criticism. And indeed there was a large attack of command-and-control that came 10 or 15 years later. But actually a lot of that attack was ideological in nature – that is to say we were now in some of the Western countries in the era in the United Kingdom of Margaret Thatcher, in the United States of Ronald Reagan and neoliberal ideology was the fore, markets were good; regulation was bad, you didn't have to think about it too much, you knew this was the truth, it was a matter of fact – and so command-and-control regulation – you know, government intruding into the affairs of business was very unpopular.

But it wasn't possible for the governments, even for those right-wing governments at the time, to abolish that legislation: the support for it from people was too strong, so it wasn't actually abolished but it was toned down, the regulatory agencies were, their budgets were sharply cut or the regulatories were sent out to obscure places where no one wanted to live and there was an attempt to reduce its effectiveness, but it couldn't be destroyed even politically at that time – the law and regulations were still around. But we saw a shift, a shift in focus. Part of that shift was towards economic instruments – look, if we can have pollution [tractors - sounds like], if we

can have trading schemes, trading schemes for sulphur dioxide called the Acid Rain Programme, then we'll be able to achieve pollution targets but much more efficiently, at least cost to industry.

But actually despite all the rhetoric, there are only a very limited number of economic instruments actually enacted. What we found much more was a dilution of law and dilution of regulation through a whole bunch of very soft instruments – voluntary instruments. Industry would say – look, we don't need regulation, trust us, we will clean it up; you don't have to regulate us. Look, we'll sign a voluntary agreement; we're the chemical industry, we'll sign something called 'Responsible Care' and we'll promise that we'll have various standards and we'll police them ourselves and there's no need for government regulation. Or you'd have negotiated agreements where instead of government actually enacting legislation, they would say, well, if you, the pulp and paper industry will agree to commit to the following targets then we won't bother with regulation, just tell us when you reach the targets in five years time. So there was an emphasis on partnerships with industry, industry self-regulation, co-regulation. So trust is placed industry to do a lot more for itself; government is now involved in a very light-touch or light-handed regulation, if you like.

Did it work? Well, perhaps predictably, not very well because industry still felt there was a large gap between its self-interest in pumping out its junk into the river as cheaply as possible and polluting the environment – that was cheaper than putting in place pollution controls. And so the standards of the industry promised to set turned out to be pretty modest standards and the self-policing of those standards turned out to be weak and ineffective with lots of free-riders, individual firms who didn't comply. And when studies were done 10 years later mostly it was a fairly dismal picture. But under neoliberal ideology that was said to be the best way to deal with the environment.

Then we arrived at a perhaps a transitional strategy which is closely associated with the Clinton in the United States, and which went under the banner in the United States under Clinton and Gore of reinventing environmental regulation. And it's curious that democratic governments in the United States or Labour governments or the new Labour government in the United Kingdom, didn't swing back after the era of Thatcher and Reagan, they didn't swing back when they came into power to an old star command-and-control regulation – there were after all new Labour or the equivalent – they were much more gentle on business than their predecessors had been – and what we found was, yes, the environment was to be regulated but it was still to be light-handed regulation, it didn't want to intrude too much into industries affairs.

And what was particularly striking and is worth talking about is a particular experiment called the Yorktown experiment, where an Amoco oil refinery said to the Environment Protection Agency in the United States – look, you have all these laws, highly specific detail laws that tells us to do this, do that, put a filter there and trap pollution there – but actually we don't think that those laws actually address our most important environmental problems. But it's costing us a great deal of money and we're not actually making the environment much cleaner; why don't you leave us alone for a couple of years and let us devise our own controls, let us prioritise

because we know how a business runs, we know where the real problems are – and let's see what happens. And remarkably the EPA agreed with this and the experiment was very successful in the sense that Amoco cleaned up, that they reduced their overall pollution by close to an additional 50%, which is dramatic, and they did so at less cost than under the previous system – so it was a dramatic change, and they said – look, you know, the worst problem was benzene when they were transferring between facilities or ships and the tanks – there were no controls on benzene, it's a very nasty substance but there were no laws about it, a lot of it was escaping and that was the biggest problem to target.

Anyway, the point was that if you gave flexibility to business, it could identify its problems and it could solve them at less cost than by micro managing. But and this is the big but, there had to be an incentive for business to do that, you did still have to have a regulator breathing down their neck or supervising before they would do that. Nevertheless, the Yorktown experiment led to a changed perception of how to regulate. So can we, said the Clinton Administration, develop a more co-operative relationship with business, one built on trust and reciprocity? Can we discover win-win solutions where things that are good for the environment are also good for business, because if business cleans up its act then in some circumstances at least they're more efficient, they've put less stuff into the process; they save energy, they can actually sometimes both save money and protect the environment.

How far they can do that is another question, but that was part of the idea. And could we encourage the better part of businesses to actually do more than the law required, to go beyond compliance. How are we going to do this? Well, by this time – this is quite important – there were new technologies in place, um, technology is perhaps the wrong word – the environmental management systems had become quite prevalent, so an environmental management system crudely might say a plan-do-check review, as in, okay, whatever your facility is, plan how you're going to protect the environment. Well, first you've got to set some targets and plan. Then you've got to actually implement the plan, so that's the 'do' bit. Then you don't know of course when you do things whether they're going to succeed or not – so you have to monitor every thing you do and measure – and you find out by doing that that some of the things you planned and did actually worked and they cleaned up the environment relay well and others actually were an abject failure. But that's the learning process. So, plan-do-review-check, and then review and then do the whole thing all over again. So this was a systematic approach, so a company would for themselves gradually keep on revising their plans, checking, measuring, reviewing, improving – and so hopefully getting into what was called a continuous improvement spiral. And government's role then was not to micro manage anymore, but just to make sure that companies had the management system in place and that they're actually serious about implementing it.

But the other bit, which is why I call this a transitional strategy, was that it engaged directly with third-parties or in particular with communities, so that what the Environment Protection Authority in America particularly said was – look, if you are one of the better companies, then we're prepared to let go of traditional regulation altogether and we won't insist on the red-tape or the green-tape, but instead you've got to have environmental management system with

targets. You can have a regular environmental audit so we know that you're doing the things you said you were going to do – and the target you develop you should develop on collaboration or network discussion with your local community, you know, a community within three kilometres or three miles of the plant or whatever. So for the first time regulation actively contemplated that local communities would be participants in the regulatory game; and the decisions will be reached by collaboration rather than by conflict. Now those schemes weren't necessarily dramatically successful although some of them have been.

Then we move to another stage, I think. We're now in the 1990s, and the problems to an extent have changed; point source pollution is no longer a big issue – I mean, the air is cleaner, the water is cleaner, large businesses has a reputation to protect. They found technologies to protect the environment and point source pollution is not really the issue from the large companies. But biodiversity protection is certainly an issue; climate change is on the horizon but not really seen as all that significant. Small and medium-size enterprises is certainly an issue because there's so many of them, you can't really control them by conventional regulation. Non-point source pollution, all those little dribbly bits that go into the creak or the stream from farmers and agricultural fertilizers, and so on – so the nature of the problem has changed and those problems are much more complex and difficult to deal with. That was one shift.

So how is society going to deal with these much more complex environmental problems? They tried a number of different ways, and I'll go back and talk about some of them in a bit more detail soon, but I think one important thing is that while some of those attempts to deal with these problems where still government was going to pull the levers and having pulled the levers in this realm of small or medium-sized enterprises or agriculture was going to respond – that is there's two parties involved. But a number of these approaches gradually moved from that two-party approach to one of actively involving business and civil society. And so what I want – that's really my way in to say – look, as regulation changed in the 1990s, so it stopped being just government regulates and business does what government says, to a more complex arrangement where NGOs are involved, civil society is involved generally, and business is involved too.

So taking a look at that, the context I suppose was that the state itself in a sense was contracting – that is to say that the problems the state had to deal with was so large and so complex that often it was beyond their capability to effectively engage with them. It hadn't been too difficult 20 years before to engage with large industry; you know where they are, there's not that many of them; they're elephants, if you like, they can't move very fast, you can spot them, you can tell them what technologies to change and you can hit them with a big stick if they don't do it. But what do you do about small and medium-size enterprises – there's so many of them, you don't even know where half of them are. What do you do about diffuse pollution from agriculture, which is very difficult to know where it's coming from and how to deal with it by conventional regulation –. What do you do about biodiversity loss? And gradually, so the state was having difficulty dealing with those sorts of problems and increasingly realised that it needed the help, if you like, of communities and civil society and

also to engage directly with business and commercial third-parties, not just as the problem but at least as part of their solution.

So just taking that a little bit further and this gradually lead into collaborative governance: increasingly we found organisations of civil society, NGOs, setting standards for business behaviour. What do we mean? Well, consumer boycotts sometimes, certification programmes – I don't know strong the Forest Stewardship Council is in South Africa – perhaps not. Another example: somewhere in Indonesia in a protected area, a supposedly protected area where forests cannot be – now they're virgin forests, rich biodiversity – they're supposedly not going to be felled but the government is turning a blind eye and there are whole areas of forests being decimated, it would appear illegally. There's an NGO that's monitoring this, it's very unhappy about the situation – they could go to Indonesia and they can unfurl their banners and things but actually it's probably not going to have much impact. What did they do? They find out who is the company involved; where do they borrow their money? Oh, they're borrowing their money from a Swiss bank in Zurich. Okay, so they actually unfurl their banners and do their protests and do their invasion of the bank's major premises in Zurich because that's where they can have an impact on a player who is reputation-sensitive. The Indonesian forest company isn't reputation-sensitive but the bank in Zurich is. This is actually happening now in Australia; there's a forest project, a company wanting to build a major new mill; pulp mills are highly polluting or they can be, and actually the company in the end hasn't been able to do it. Why? Because it can't borrow the money – the reason it can't borrow the money is every time it's about to get a deal, then you open the city *Morning Herald* of the Australian newspaper and there's a full-page advert paid for by an NGO saying, the Australian New Zealand bank is about to lend Gunns money for their filthy polluting pulp mill – boycott the ANZ bank. And these adverts have been very effective; no bank will now touch that products company.

So NGOs can be highly effective in ways that we wouldn't have thought about 10 or 15 years ago; because they've learned to use the media, because they've learned in a global society to move between jurisdictions, and so on, and there's multiple ways in which they do that. But I guess the bottom line, I don't have time to talk about it in detail, is that the state increasingly sees its role or one of its roles as to empower civil society. So to give just one example from the United States: two past administrators of the US EPA, the top officials would say the single most powerful tool we've had in the last 20 years is actually not been command-and-control regulation although it's been pretty helpful – it's been Toxic Release Inventory. And what that says is all companies must estimate and disclose their emissions of 530 substances. All that information goes to the Environment Protection Agency, it's put on a database; that database is available to the public – NGOs interrogate the database, they build new tables – if you open the *Wall Street Journal* on a Monday morning and there is the list of the 'dirty dozen', the biggest polluting companies who are shamed into changing their practices. So that information was only available because government required it to be available – that's government's role – but of course it's the NGOs that built tables and then do the shaming.

So there's that movement, I think I'll just add a few things, this is just part of it. In some countries there's a great concern about the felling of old-growth forests and the decimation of

those forests and there are big campaigns against that, and so the target is often not the forest companies themselves but the retail sector. What NGOs do is they look for the most vulnerable target, you look for the weakest link, and often that is the most reputation-sensitive company. So in the United States it's Home Decor, a huge do-it-yourself store – you know, on a Sunday morning everyone is going to buy their pieces of wood and do-it-yourself hardware from Home Décor – so their to greet you on a Sunday morning, unfurling their banner from a crane: Home Décor's logo on the corner 'stop selling old-grown wood'. If that one doesn't work then it's almost done – you know, this is your inflatable chainsaw, I don't know if you can tell it's an inflatable chainsaw, but, hey, you know, you're doing your best – they're there in the car park on a Sunday morning, lobbying customers not to buy – you know, boycott Home Décor, go to somewhere else that's using properly certified wood grown in a sustainable way. If that one doesn't work, let's get the kids involved. There are many many variations on this, I just thought I'd have this just for a bit of fun, but it can be quite effective. And in the end, what was interesting, in the end Home Décor didn't want to give in to the NGOs, to Greenpeace and the others, or Friends of the Earth – but in the end they did, they stopped buying wood from what we call uncertified sources. They stopped buying wood which had probably come from the clear felling of old-grown forests. Now those same NGOs, when they went to the next store down and Home Décor was the biggest one, they go to the next store down – it took two phone calls and they rolled over because they had seen what happened to Home Décor and they didn't want to have that same fight, so they acquiesced, they said, okay, we agree with you, we'll do what you NGOs say, we'll only buy from certified or sustainable sources. So the power of NGOs sometimes, only sometimes is not to be underestimated.

So what about business – you know, business is obviously another part. Is business simply part of the problem or can business sometimes be part of the solution? And increasingly, over the last 10 or 15 years at least, there are arguments that smart business sometimes has an enlightened self- interest in improving its environmental performance. Now there are multiple reasons for that; it really depends on the context, it depends on the nature of the particular industry and you certainly can't make this claim across the board. But sometimes environmental protection is a sensible matter of risk management. Just to give one example which is now very old; it is used in all the business schools.

Many years ago in the North Sea off the coast of Europe, British Petroleum had an old oil rig. They no longer needed it and they wanted to dispose of it and they had some scientific surveys done, they were told the most sensible thing to do was tow it out to the deep sea and sink it. It's true, it had lots of toxic parts to it but if you sink it in the deep sea, most of those won't spread and there doesn't seem to be much lying down there and it won't be too expensive. And they asked the British and the Dutch government if that was okay, and they said, yes, and there didn't seem to be any problems. So they had their plans to tow the rig out and simply dispose of it in the deep sea. Greenpeace, a major NGO, discovered that this was going to happen and Greenpeace was also looking at a campaign at that time, they had a checklist of about 16 factors and they were looking for a target. They wanted a media campaign which would increase their profile and increase contributions from members of the public, and they were looking for a

cause, if you like. And one of their researchers stumbled across what British Petroleum was going to do, and said, - look, this ticks 15 of the 16 criteria – and they conducted a campaign.

The campaign was in interesting one; it was basically very simple: don't litter – I wouldn't litter my own backyard, British Petroleum is going to litter the North Sea by dumping their oil rig. And they mounted a campaign, it's worth telling the story but I'm short of time, because it was so effective. BP didn't get it; they didn't understand the power, the potential power of an NGO. So they ignored them and they ignored them again. And then Greenpeace mounted their campaign – and to cut it short, they protested, they had banners. But also they then went out and BP just ignored them and they started taking the rig out further into the deeper seas, at which point Greenpeace had dinghies and then tried to approach them in the dinghies. And BP turned water cannons on them. Now that was an enormous mistake because it makes prime-time television. There are these tiny little boats, courageous Greenpeace activists and there are these big thuggish corporation multinational with cater cannons on them. I mean, you know, it made prime-time television .And Greenpeace, it was the best day for them for years! And things got from bad to worse; anyway, in the end BP had to completely capitulate. In the end they agreed to pull the whole thing off, they had to sit down with Greenpeace; in the end they actually towed it off and I think part of the rig was dismantled, though incredible costs, to make some sort of bridge and other things in a Norwegian field. But the point is risk management – BP had no idea the damage that an NGO could do to them. And I've only told you a little bit of this story, but there was a time when there was going to be a boycott on all BP products in Europe because the Germans and the Dutch in particular were so outraged, so the winter heating season was coming up and BP was going to lose their market. Once people have moved to another heating supplier they weren't going to move back. So the economic costs for British Petroleum were huge; risk management in the environment – and that is if you've forgotten after that particular case.

Sometimes environmental protection is a business opportunity; if you clean up your act sometimes you can find niche markets, sometimes you save money by using less stuff, and so on. There's a whole movement called Corporate Social Responsibility – and sometimes it's about protecting your reputation. Again, just one example: some years ago I was doing a study of the pulp and paper industry in North America. Now pulp mills smell; they are horrible facilities, you can tell when you close to a pulp mill, you're only got to wind down a window of your car and you know; they're unpleasant. And often they're located in the middle of nowhere; sometimes they're located on the coast, near a water supply. But we've had one that was located very close to a city centre – and it's remarkable, 30 years ago this city had been a poor community and had a lot of heavy industry. But in the meantime income levels had improved greatly, it was now under the high-tech area and all the other industry had gone, and there was still this pulp mill left. Now why hadn't it been closed down? And the answer was that the pulp mill had made such an incredible effort to connect with the local community, to build trust with the community of which it was a part. So if they ever had a spill, there were two phone calls that were made immediately. The first phone call was to the local community groups – come on down, we've had an accident, we don't know how serious it is – come on down and we'll tell you when you get here. And the second one was to the Environmental Protection Authority. But

they listened to the local community; they were the first mill in North America to become what's called the Superfund Clean up Site, meaning that they did voluntary things to improve the environment from contaminated substances. They built up trust over the years to such an extent that when Greenpeace came to town to try and embarrass them, the local community groups said – go away, we're not interested, this is our pulp mill.

So the point is they had a social reputation capital to protect and they protected it very well. So by doing the right thing by the environment, that actually was what sustained their business. If they hadn't done the right thing about the environment and built up the trust with the community, they would have been gone years ago. So the connection between business and NGOs and the environmental protection – it's more complex than we think.

So I've been talking about government separately, business separately and NGOs separately, but of course it's all interconnected. How can we make sense of it as an interconnected whole? Well, one possible way of doing it, it's something that's sometimes called smart regulation. What smart regulation really says is, well, in the past we've had a whole bunch of people in one direction saying the answer is the market and the market will solve our problems. We know that's not true. We've had another group of people saying its government intervention. And there's some truth in that but sometimes that government intervention has been heavy-handed and clumsy. What's the best way to deal with these problems? And to suggest that there are no magic bullets – one size doesn't fit all; you need different solutions depending on what the size of business you're dealing with and what sector. But really what you need is a broader range of strategies; it's fine to have a hammer if you're hitting a nail, but if you're not hitting a nail you need other tools. So we need a broader range of strategies. We've got to recognise that business has a whole range of motivations and target our approaches to those motivations. But crucially we've got to harness a broader range of social actors – so it's not enough for government to in and do things. Yes, NGOs can sometimes be harnessed – I've already talked about the power of NGOs, but sometimes it's supply-chain pressure. Sometimes commercial institutions like insurance companies – Clifford's doing a project on insurance companies – can make a difference because they are powerful players in the market.

Just to give on example: the car smash repair industry causes quite a lot of pollution problems – it uses solvents, an amount of chemicals, and so on, and it's very difficult to get at by regulators because there are thousands and thousands of little small crash repairers, what is sometimes called body shops, using solvents, spaying their paint, and so on. How do we get at those people? There aren't enough regulators to do it – how do we get at them? How do those people deal with? At least in my country 90% of car smash repairs are actually dealt with by the insurance company. It's the insurance company that decides who is going to repair that particular car, so if the insurance company says we're only going to deal with smash repairers who have got in place the green solution or the green body shop who have got an environmental management system, and so on, in the stroke of a pen almost, those facilities that won't comply, who won't buy into that are gone. So we harness third-parties, we use commercial institutions and the role of government becomes steering or rowing. That's one way of thinking about it.

One example of how smart regulation might work. The nuclear power industry – in the United States there was an accident called 3 Mile Island, where a nuclear facility nearly melted down; it wasn't Chernobyl but it almost was and it was a tremendous scare. And at the time the nuclear power industry, which was about 80 faculties thought if we have another 3 Mile Island, we're gone – that is to say the government will close us down. Now that wasn't a sill thought – you think in Germany at the moment, following the Japanese near meltdowns – you know, Germany's announced no more nuclear power stations. So this wasn't a fantasy, it was very real at that time for the nuclear power industry – if we have another disaster like 3 Mile Island, we'll all be gone. So they had an enormous self-interest in insuring that another accident didn't take place. So they set up a self-regulatory framework. I normally don't believe in self-regulation very much but in this particular case there was an enlightened self-interest – they needed good people so they went to the nuclear navy and that's where you find the best technician and they bought them up, they're private enterprise, they could afford it. And they went into all the faculties and they knew where the bodies were buried, if you like, they knew what questions to ask because they are highly specialised and they wouldn't take no for an answer. And the record of the nuclear power industry in safety and environment did significantly improve.

But, this is the big 'but' – so, so far this is a rare story of successful self-regulation. But after a few years there were a few companies, you know the cowboys, the bad guys at the end of the scale, who really weren't responding to the self-regulatory initiative. And the problem is there's nothing that the self-regulators could do about it – because they're not government, they don't have the power to imprison, they don't have the power to fine. They have the power to cajole, to encourage, persuade – but that's about it. And so they've run up to the limit of their powers – and what they had to do in the end is they had to develop their dossier of all the bad things that these few companies had done – you know, how near they were to a disaster – and then presented all that information to the Nuclear Regulatory Commission, the government regulator, who then came in and said – okay, guys, either you change your whole board of management, you change everything or we the government will close you down.

Why do I tell the story – it's because this is intended to be a pyramid; I borrow some of it from my colleague, John Braithwaite, and parts of it are from Smart Regulation. So you think of it as three sides – there's government on one side, business on the second and the third part is like NGOs on the third side. Now at the bottom of the pyramid you use advice, persuasion and coercion – gentle softly-softly stuff. And then gradually you escalate up and you think about administrative notices and warnings, and so on. But really you still need, in any regulatory system you need a typical pyramid where you hit people over the head with a very big stick – you hang them in the public square – you've got to do something very very strong, because if you don't do that with some people then the rest will gradually get slacker. So, but you want to spend most of your time at the bottom of the pyramid being softly-softly, but be prepared to escalate when it's necessary.

Now the trouble for the nuclear self-regulatory scheme is that you do a very nice job at the bottom of the pyramid, they get encouraged, they get cajoled, they get displayed – and that

was fine – 80% - 90% of their members. So far we're on the business phase of the pyramid because there's purely self-regulation by business. But actually that's not enough. Towards the top, when you want to get heavy, when you want to hit people over the head, you needed government – they didn't have that power, so you have to pivot, if you like, to another side of the pyramid, to the government side of the pyramid, and what you're doing there is an example where you use self-regulation where you can, but as you progressively move up you realise you have to harness other parties – government or NGOs, in this particular case, government, because only they have the power to cut off heads and close people down.

So just to move on, a second way of thinking about things which is perhaps useful is to ask – you know, many polluters are business – so the question: 'why do businesses behave the way they do?' is a useful question. It's a really important question because once you've figured out why businesses behave the way they do, then you know what levers to use, what tools are more likely to affect them. And in work I've done with my colleagues from Berkeley – we came up with the idea of thinking about business behaviour in terms of what we called 'a licence to operate'. And we talked about three different types of licensees: an economic licence, a regulatory licence and a social license. So the economic licence is basically for a private company, we're in business to make a profit, to keep our shareholders happy – we've got to make money to survive and if we're not going to make money we're not going to do that. By and large, not totally across the board but by and large, we don't want to spend too much on the environment because then we'll make less profit. So the economic license in crude terms tends to tug down, to bring down the environmental performance. Then there's a regulatory license: thou shalt not pollute, thou shall have a license, etcetera. And the regulatory license lifts you up to a minimum acceptable standard of behaviour = this much we know. But on top of that and not to be taken lightly is the social license. The social license is, if you like, the fact that a public company needs to protect its reputation, it needs to maintain trust and if it doesn't it can suffer badly. Think back to BP and [inaudible] and Greenpeace – that was a company that had lost their social license to operate. Think of my example of the pulp mill – still there in the town where all the other industry have gone away – that's a company that very successfully preserved their social licence. So what's interesting about the social licence is that it actually takes a company much further and much higher in terms of the environmental performance and the regulator license. So in a sense you have the economic licence that tugs the company down; you have a regulatory license that pulls them up to a minimum acceptable standard, but above that, if you're talking about large reputation-sensitive industry, they have to go even higher than that to keep the local community happy. And if you don't keep the local community happy you may find that you've been closed down.

Let's take stock and then I'll do my 10 minutes that leads directly into Cam's paper after a break. What have we been talking about? In a sense I've been suggesting that traditional regulation, the command-and-control of the 1970s has been rejected in favour of light-handed regulation – and that light-handed regulation has taken various shapes and forms in different eras. It was light-handed in the 1980s when it was voluntary in the self-regulation and partnerships which didn't work too well. It was the environmental regulatory flexibility mechanisms of the Clinton era. But what we also find is that the contemporary environmental challenges – biodiversity,

climate change, small and medium-size enterprise, diffuse source pollution – whatever you want to call it – they don't, in any event they're too complex to lend themselves to direct command-and-control regulation anyway. So the state – I guess this the bottom line – the state has reached the limits of its capacities, if you like. It wasn't too hard for the state in the 1970s to say – that's a pulp and paper mill, and, alright, they're going to have to put in place particularly technology and we can measure their outfalls to make sure that biological oxygen demand isn't more than five parts per million or whatever it was. That's wasn't too hard to do.

But you try dealing with hundreds of thousands of small and medium-size businesses or try to figure out how do you use command-and-control on diffuse source pollution when you can't even measure the stuff or even figure out who's causing most of it, and it will be beyond the capacity of the state to deal with that. So when the state has reached the limit of its capacity, what does it do? Well, it can do smart regulation, it's trying to use broader instruments and it is trying to harness third-parties and it's trying to harness business and NGOs, etcetera. That's okay but it's still a very much a state-centred – you know, the state is still at the centre of that but every now and again it says, can we use an NGO over here, an insurance company there, or can we persuade business to regulate itself over here. But it's still the state trying to pull all those levers. You can try various other strategies that I've talked about so far, but you're still pushing up against the limits of the capacity of the state.

And the question in some areas, often called wicked problems, environmental problems that are just so complex that at least so far the state doesn't have an answer, we start to look elsewhere. All I'm saying is so far the strategies we've used – license pressures, harnessing the social license, smart regulations that they call meta regulations, which we haven't had time to talk about – they still think the key actor is the state and the key instruments are underpinned by state law. Now the great leap, I suppose, of new environmental governance or collaborative governance, whatever you want to talk about, is to recognise the limits of the state and to think beyond it to a different solution. So where do we go next? Is the capacity of the law to exert control limited? Well, it is very limited when we're dealing with the next generation, if you like, of environmental problems, which are of such a degree of complexity that traditional strategies are no longer working. And we find that control based on law, which was where we started, is now really marginal to, if you like, contemporary processes of ordering – you know, there's a lot of things that the law can't touch, and I think particularly in a society such as this one, probably a lot of things that the law can't touch. And perhaps the state law is only effective anyway when it's linked with other processes, when you're harnessing NGOs, when you're using public pressure, when you've actually got some willingness of industry to buy into the whole thing. And perhaps we've reached the stage where the state isn't actually at the centre of the picture anymore, or it's reached the limits of its capacity to pull those levers, even in conjunction with other parties; and we've moved to something else.

If we have moved to something else, and that's really the rest of the day that we talk about this in more detail, what is it? Well, the new environmental governance, to give my one-minute version, I suppose is just a definition and Cam will talk about it much more. Now what is it? Well, it's a collaboration between a diversity of private, public and non-government

stakeholders who're acting together towards commonly agreed goals hoped to achieve more collectively than individually. Now that doesn't tell you that much. Let me tease it out in a bit more detail by talking about one particular experiment that took place in Australia. So we're talking natural resource management. Now Australia is a big country, it's got lots of serious problems on the land – we have dry land salinity, we have endless droughts, we don't have a large enough water supply. The water we do have is not properly managed; much of it is wasted or goes to the wrong places. We've got the wrong crops in the wrong place; we over-crop the land, we put animals on the land which damage our very fragile topsoil which then blows away to New Zealand. We have endless problems and it's very difficult – you know, this is a complex environmental problem and it's very difficult for a bureaucrat or an enforcement officer in Canberra in the capital or in a state capital, to actually go 500 kilometres out into the country, or more, when you've got thousands of different farmers, thousands of different land-holders, all doing different practices – you know, you'd just be overwhelmed.

So what we do know from the past is that voluntary approaches haven't worked. We've sent farmers and other land-holders out endless information packs about what they should be doing and what's a good idea. It's had only a very little impact. Government regulation hasn't worked. Is there something else that might work for a wicked environmental problem, like natural resource management in Australia. And this system is changing but in its original conception, it was said, well, look, first of all, we need to deal with these things in the ecosystem – different areas of land have very different problems, it makes no sense to say we'll do solutions that are at state-level; we have six states in Australia or local government level or local government units – because actually none of those units, they're political units, they're not environmental units. So we need to divide the country up according to the ecosystem.

So we did that or the government did that – divided it into 56 regional bodies, what is sometimes called a fourth sphere of government because they were neither state, federal or local government – they were something else. And the idea was with a pot of money from federal government, to say to each of those communities which are very different, they had very different environmental problems – you've got huge diversity. Okay, how are you going to best manage all the environmental problems of that area? Well, you guys figure it out, we the federal government don't know, we can't micro manage you because the problems you have are very different from the problems of the next area and they're known to you because you are the local community, they're not known to us in detail, the federal government, so you figure it out. So community, rural and urban stakeholders were invited to collaborate, to develop a regional plan – each of these region develop an investment strategy, performance indicators, all the other things that you would expect to develop a partnership, if you like, to figure out what the best ways of dealing with environmental problems in that area were over the next 5, 10, 15-year period. Federal government was still involved because it handed over money to do those things, but that was the extent of its involvement.

So what have we got? And here I'm about to finish – so the state – it's a very different way of thinking about the world because the state is assuming it has only very limited ability to directly intervene in the problems of the land, that it absolutely had to enlist non-staid actors, local

communities, local groups, local government, state government, etcetera, who have local capacities and local knowledge, but you end up involving a combination of government and non-government actors – so it's multi-party, it's multi-level, it's multi-faceted. You have formal democratic accountability, etcetera. It's a very different way of conceiving of the world and of governing. And it's arguably one where the role of the state is no longer at the centre – you know, you've got participatory dialogue, you've got devolved decision making – all these other things – but government isn't pulling all the levers anymore; government is simply only one player in a wider scheme.

Now the question of, 'well, does it work?' is a question we'll come onto later in the day, but I would suggest – now I'm conscious that the journey I've described: the command-and-control, the soft instruments, the light-handed regulation – I mean, it's story more of Anglo-Saxon developed countries, I'm conscious. But it does strike me that when you're dealing with enormously complex problems that are increasingly beyond the capacity of the nation state to solve, that the issue of collaborative governance might be something that would resonate – you know, I mean, I have to be extremely careful – my knowledge is not of South Africa but I think the concept of collaborative governance is one that might well resonate to a country with the sorts of challenges that South Africa has. So that's really the conversation for the rest of the day. And I've gone on far too long and I apologise for that – so I'm done". [applause].

[END]